

November 5, 2003

MEMORANDUM TO: Chairman Diaz

FROM: Hubert T. Bell/**RA**  
Inspector General

SUBJECT: INSPECTOR GENERAL'S ASSESSMENT OF THE MOST  
SERIOUS MANAGEMENT CHALLENGES FACING NRC  
(OIG-04-A-01)

### **SUMMARY**

On January 24, 2000, Congress enacted the *Reports Consolidation Act of 2000* to provide financial and performance management information in a more meaningful and useful format for Congress, the President, and the public. Included in the act is the requirement that the Inspector General of each Federal agency summarize what he or she considers to be the most serious management and performance challenges facing the agency and assess the agency's progress in addressing those challenges. In accordance with the *Reports Consolidation Act of 2000*, I am submitting my annual assessment of the major management challenges confronting the U.S. Nuclear Regulatory Commission (NRC). Also, included in my submission, is a listing of Office of the Inspector General (OIG) reports issued during fiscal year 2003. These reports address the challenges identified.

Congress left the determination and threshold of what constitutes a most serious management challenge to the discretion of the Inspectors General. As a result, I applied the following definition in preparing my statement:

Serious management challenges are mission critical areas or programs that have the potential for a perennial weakness or vulnerability that, without substantial management attention, would seriously impact agency operations or strategic goals.

The most serious management challenges facing NRC may be, but are not necessarily, areas that are problematic for the agency. The challenges, as identified, represent critical areas or difficult tasks that warrant high-level management attention. This year, I identified nine management challenges that I consider to be the most serious.

## **DISCUSSION**

The most serious management challenges that follow are not ranked in any order of prominence.

### **CHALLENGE 1**

#### ***Protection of nuclear material used for civilian purposes.***

Over the past fiscal year, NRC has been overseeing the implementation of enhanced security measures and determining the appropriate level of security needed to protect civilian nuclear power facilities. The Chairman has stated that he intends for NRC to continue to work with the Department of Homeland Security and other Federal agencies, as well as state and local law enforcement and emergency planning officials, to ensure an integrated approach to protecting these critical facilities.

NRC's requirements for nuclear plant security are based on the need to protect the public from exposure to radioactive release caused by acts of sabotage. Therefore, NRC has taken a number of steps to strengthen security at NRC-licensed facilities. These measures include issuing requirements to enhance training and address security personnel fatigue at nuclear reactor sites to increase capability to detect and respond to threats. NRC also required plants to enhance access controls to prevent unauthorized entry of persons to nuclear facilities. NRC continues to work on revising the design basis threat (DBT) for nuclear power plants. The DBT defines the threat against which these facilities must be capable of defending and provides a foundation for developing defensive response strategies that cover a variety of situations.

NRC has made two organizational changes to further strengthen its security response capabilities. In April 2002, NRC established the Office of Nuclear Security and Incident Response (NSIR) to consolidate NRC's security, safeguards, and incident response functions. This office restarted security exercises at operating nuclear power reactor facilities, which had been discontinued after September 11, 2001. The second organizational change made by the Executive Director for Operations (EDO) in June 2003 established the position of Deputy Executive Director for Homeland Protection and Preparedness. This new Deputy is responsible for working across agency lines of authority to resolve homeland protection and preparedness issues.

### **Related Office of the Inspector General Work**

#### **Audits**

- Audit of NRC's Oversight of Research and Test Reactors
- Audit of NRC's Regulatory Oversight of Special Nuclear Materials
- Management Audits of NRC's Four Regional Offices

### Investigations

- Adequacy of NRC Oversight Related to Reactor Vessel Leakage at Oconee and North Anna Nuclear Power Stations
- NRC Enforcement of Regulatory Requirements and Commitments at Indian Point, Unit 2
- NRC's Regulation of Davis-Besse Regarding Damage to the Reactor Vessel Head
- NRC's Regulatory Oversight Over the Control of Special Nuclear Material at Millstone Unit 1

## **CHALLENGE 2**

### ***Protection of information.***

NRC employees generate and work on a considerable amount of information that is sensitive and needs to be protected. Such information can be sensitive unclassified information or classified national security information and is contained in written documents and in electronic databases. Recent OIG audits found that improvements were needed in the areas of administrative procedures, information technology controls, and physical security controls.

NRC has made various efforts to protect sensitive information from inappropriate disclosure. For example:

- ◆ Implementation of additional warning messages to the Agencywide Documents Access and Management System (ADAMS), NRC's electronic recordkeeping system which houses vast quantities of agency information. These messages are intended to prevent the release of sensitive documents or packages by reminding staff when such information is not intended for public release.
- ◆ Addition of a sensitivity warning message at the bottom of every page on the agency's internal Web site to remind staff that sensitive information should not be made publicly available.
- ◆ Revision of agency sensitive unclassified information and classified information cover sheets to include specific information on the appropriate handling and marking of the various categories of information.
- ◆ Issuing orders to licensees for panoramic and underwater irradiators to improve security. These orders added a new document designation/marketing to protect safeguards information. This designation ("Safeguards Information — Modified Handling") is intended to clarify the handling requirements for safeguards information.
- ◆ Training provided by the Office of NSIR to all NRC employees on the handling of sensitive unclassified and classified information. In addition, NSIR offers a monthly refresher training course on the subject. Agency employees are also required annually to complete an online computer security awareness course.

## **Related Office of the Inspector General Work**

### Audits

- Computer Security Review at NRC's Technical Training Center
- Computer Security Reviews at NRC's Region I, II, III, and IV
- Independent Evaluation of NRC's Implementation of the Federal Information Security Management Act for FY 2003
- Management Audits of NRC's Four Regional Offices
- Review of NRC's Handling and Marking of Sensitive Unclassified Information
- Use of E-Mail at NRC

### **CHALLENGE 3**

***Development and implementation of a risk-informed and performance-based regulatory oversight approach.***

NRC faces numerous challenges in making its regulatory framework more risk-informed for nuclear power plants and nuclear material licensees. In April 2000, NRC implemented the Reactor Oversight Process (ROP) to move toward a more risk-informed regulatory philosophy that enhances safety decisionmaking, improves efficiency, and reduces resources devoted to issues with low safety significance. The ROP relies on a risk-informed inspection program to provide increased focus on specific aspects of plant performance that have the greatest impact on safe plant operation. The process focuses on seven specific cornerstones of safety: initiating events, mitigating systems, barrier integrity, emergency preparedness, public radiation safety, occupational radiation safety, and physical protection. The premise is that safety is maintained if the licensee performs acceptably in these cornerstones.

NRC is currently working to further its risk-informed approach by revising its nuclear plant regulations developed to ensure safe plant operations. To make the regulations more risk-informed, NRC needs to analyze the risks associated with any area subject to regulation to determine the appropriate level of regulatory emphasis. According to the agency, this approach will result in regulations that are more safety-focused and performance-based by focusing oversight on results rather than on prescriptive requirements.

NRC is also currently working to risk-inform its approach to regulating nuclear materials and waste. According to the EDO, the implementation of a risk-informed approach to this area has led to an improved focus on safety and a reduction of unnecessary regulatory burden. The EDO maintains that the agency has successfully used the risk-informed approach to improve efficiency and effectiveness while maintaining safety in several areas. These changes include the integrated safety analysis review, byproduct materials inspections, and spent nuclear fuel transportation and storage. There also is an ongoing agency effort to examine the materials licensing and certification programs to identify opportunities for improvement.

According to the NRC Chairman, NRC has made progress over the past 10 years in implementing risk-informed regulation, however, the agency still has a long way to go to fully

implement the process. He anticipates that risk-informed regulation will continue to be a major area of focus for NRC.

### **Related Office of the Inspector General Work**

#### Audits

- Audit of NRC's Oversight of Research and Test Reactors
- Management Audits of NRC's Four Regional Offices

#### Investigations

- Improper Influence by NRC Staff on Results of NIST Test
- NRC Regulation of Davis-Besse Regarding Damage to the Reactor Vessel Head

### **CHALLENGE 4**

***Ability to modify regulatory processes to meet changing external demands.***

NRC faces numerous challenges related to the changing regulatory and business environment. The increased demand for electric power has created challenges pertaining to such areas as reactor license renewals, license amendment requests to increase reactor power output, new plant designs, and high-level waste disposal. The agency is also striving to ensure its readiness to deal with applications for new plants.

#### Reactor License Renewal

The improved performance of nuclear power plants over the past decade has caused many of NRC's licensees to consider renewing their licenses rather than decommissioning their plants when the licenses expire. Approximately half of the operating nuclear reactor units in the U.S. are currently involved in some stage of the license renewal process. To regulate this activity, NRC established a license renewal inspection program to verify information submitted in the renewal applications. This program also includes an agency safety evaluation and environmental impact analysis.

#### Applications To Increase Power Output

As of April 2003, NRC had completed reviews of 92 requests from licensees to increase reactor power output. NRC staff estimate that over the next 5 years, NRC will receive an additional 35 such requests. These requests involve complex, technical issues and NRC's review of the application to ensure safe operation. NRC considers the request as a high priority that requires input from many technical areas of the agency. A number of these reviews have been completed more quickly than the agency's estimate of 18 months needed to accomplish the task.

### New Plant Designs

New proposals for nuclear power plant design are emerging with the maturation of the nuclear power industry. Numerous reactor designs have been submitted for NRC review; three are being actively pursued at this time. According to the EDO, the staff is making infrastructure improvements to ensure that tools, information, and regulatory processes are in place for the efficient, effective, and realistic review of these applications and to ensure that an appropriate level of safety is maintained.

### High-Level Waste

According to the Nuclear Waste Policy Act, the Department of Energy (DOE) has the responsibility to locate, build, and operate a repository for high level nuclear waste, while NRC has the responsibility to establish regulations over this facility. NRC expects to receive an application next year from DOE for a permit to construct a permanent repository for high-level waste at Yucca Mountain in Nevada and has begun review preparations. NRC anticipates that the administrative proceeding to assess the repository will be an enormous undertaking because many documents will need review in a 3-year time frame. One significant challenge for NRC is ensuring that all parties and decisionmakers have timely access to filings and exhibits.

### **Related Office of the Inspector General Work**

#### Audits

- Management Audits of NRC's Four Regional Offices

#### Investigations

- Unlawful Interaction Between NRC and DOE Staffs Regarding Yucca Mountain

### **CHALLENGE 5**

#### ***Acquisition and implementation of information resources.***

Federal agencies' acquisition and implementation of information resources are crucial to (1) support critical mission-related operations and (2) provide more effective and cost-efficient Government services to the public. The necessary link of information technology to NRC's mission performance makes it important to have decisionmaking processes assure that funds are invested and managed to achieve high value outcomes at acceptable costs. NRC relies on a wide variety of information systems to help it fulfill its responsibilities and support its business flow. NRC, like other Federal agencies, continues to struggle in its effort to obtain a good return on these investments. In recent years, NRC has created large databases of publicly available information including ADAMS, the Licensing Support Network (LSN), and the NRC Web site. NRC also has issued a final rule to clarify when and how external stakeholders may use electronic means to communicate with the agency.

## ADAMS

ADAMS, an NRC electronic recordkeeping system, maintains official records of the agency. Implemented in April 2000, the system continues to pose concerns for NRC. In January 2003, NRC modified the public's ability to access ADAMS by instituting a Web-based interface with search capabilities. According to the agency's Chief Information Officer, this new Web-based interface is a significant step forward in NRC's efforts to support the Governmentwide electronic Government (E-Gov) initiative. NRC also implemented the ADAMS Legacy and Public Legacy Libraries, which contain more than 2 million bibliographic citations describing documents dated prior to November 1, 1999.

## LSN

NRC's LSN is a public database developed in response to a congressional mandate that NRC assess DOE's application to build a high-level radioactive waste repository at Yucca Mountain in a 3-year time frame. To expedite the exchange of documents in NRC's licensing proceeding, the parties will make their documents available via the Internet before the DOE license application is submitted to NRC. The LSN provides a single place where the parties can search for documents from any/all of those collections in a uniform way. The challenge facing NRC will be to ensure that all potential parties have reliable access to this large database of documents.

## Internal Web Site

NRC redesigned its internal Web site to improve delivery of information. Changes include links to Network Announcements issued to staff from the agency and a comprehensive agency telephone directory.

## E-Rule

NRC is issuing its final rule, "Electronic Maintenance and Submission of Information" (E-rule), and a related guidance document. These documents clarify when and how licensees, applicants, vendors, external entities, and other members of the public may use electronic means to communicate with the agency. The rule, expected to become effective in January 2004, modifies numerous provisions in NRC's regulations to allow for voluntary electronic submission of documents in lieu of paper. The guidance document includes the required procedures for corresponding with NRC by CD-ROM, e-mail, facsimile (fax), or by using the agency's Electronic Information Exchange to exchange electronic documents in a secure manner and in a secure Web environment.

The E-rule provides NRC with an opportunity to modernize its business processes to improve technology. For example, the E-rule eliminates most of the paper and multiple copy requirements traditionally imposed on individuals submitting information and will allow submitters to provide one copy in most cases. In addition, the guidance document requires that electronic files be submitted in Portable Document Format (PDF) and that very large files be submitted in segments so that they can be more easily captured in ADAMS and viewed and downloaded by the public via the Internet.

### **Related Office of the Inspector General Work**

#### Audits

- Audit of NRC's Regulatory Oversight of Special Nuclear Materials
- Follow-up Review of NRC's Internet Usage
- Independent Evaluation of NRC's Implementation of the Federal Information Security Management Act for FY 2003
- Management Audits of NRC's Four Regional Offices
- Use of E-mail at NRC

#### Investigations

- Misuse of NRC Computers to Access Inappropriate Material

### **CHALLENGE 6**

#### ***Administration of all aspects of financial management.***

NRC must be a prudent steward of its fiscal resources through sound financial management. Sound financial management includes the production of timely, useful, and reliable financial information to support agency management; an effective cost accounting system; well-developed strategic planning; and an integrated method for planning, budgeting, and assessing performance to better enable NRC to align programs with outcomes. Sound financial management also includes how an agency procures goods and services. Procurements must be made in accordance with Federal regulations and with an aim to achieve the best value for the agency's dollars. Without effective management controls, the procurement process is susceptible to fraud, waste, and abuse.

FY 2002 was the ninth consecutive year for which NRC received an unqualified audit opinion on its financial statements. The FY 2002 Independent Auditors' *Report on Management's Assertion about the Effectiveness of Internal Control* disclosed that four reportable conditions were carried forward into FY 2003, and that two prior years' reportable conditions were closed. One of the reportable conditions that was carried forward to FY 2003, which is also a material weakness, relates to the lack of full compliance with the Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards*. Significant progress continues to tighten controls over financial management processes. For example, NRC hired a consulting firm to assist the agency to more fully address the challenges associated with managerial cost accounting.

### **Related Office of the Inspector General Work**

#### Audits

- Audit of NRC's Fiscal Year 2002 Financial Statements
- Independent Auditor's Report - Close-Out Audit of GSE Power Systems, Inc.
- Management Audits of NRC's Four Regional Offices

- Review of NRC's Implementation of the Federal Managers' Financial Integrity Act for Fiscal Year 2002
- Review of NRC's Purchase Order Processing

Investigations

- Early Retirement Under False Pretenses
- Fraudulent Travel Claim by NRC Employee
- Misuse of NRC Full Share (Transportation Subsidy) Program

**CHALLENGE 7**

***Communication with external stakeholders throughout NRC regulatory activities.***

To maintain public trust and confidence, NRC must be viewed as an independent, open, efficient, clear, and reliable regulator. To this end, the agency needs to provide its diverse group of external stakeholders (e.g., the Congress, general public, other Federal agencies, industry, and citizen groups) with clear, accurate, and timely information about, and a meaningful role in, NRC's regulatory process. This is a challenging task because of the highly technical nature of NRC's operations, the sensitivity of its information, and the balance the agency must maintain to remain independent.

NRC has a strategic goal to increase public confidence, yet the agency has not developed a method to measure its success in this area. The challenge for NRC is to afford all stakeholders, including the public, with appropriate and meaningful access to its regulatory process. This access must be provided in a committed, stipulated, consistent, timely, and unambiguous manner that fosters confidence in the agency. At the same time, the agency is also faced with the responsibility of protecting sensitive security and safeguards information from unauthorized access.

In June 2003, the Chairman created a task force to develop strategies for comprehensive and effective communications with external stakeholders. An August 2003 task force report stated that there must be clear demonstration of NRC's values in everything NRC communicates and does. The task force determined that NRC's effectiveness in communicating with its stakeholders varies and that while, in many cases, the agency is communicating reasonably well with its stakeholders, there is room for significant improvement. The task force made 10 recommendations to NRC to improve its external communications.

To provide integrated leadership and direction for external communications, the Chairman established the position of Director of Communications, to report directly to his office. The Communications Director is responsible for enhancing the effectiveness of NRC's communications with the public, the media, and the Congress in support of the agency's strategic goals.

NRC also implemented a strategy to enhance public participation through the three types of NRC meetings open to the public. Category 1 meetings invite the public to observe the business portion of the meeting. Members of the public are afforded an opportunity to

communicate with NRC after the business portion of the meeting. Category 2 and 3 meetings allow more opportunities for the public to ask questions and comment. NRC officials created a page on its external Web site which provides information on these three categories as well as public meeting feedback forms. The officials also created a public meeting checklist to provide staff with the guidance and the tools to plan and conduct successful public meetings.

### **Related Office of the Inspector General Work**

#### Audits

- Audit of NRC's Regulatory Oversight of Special Nuclear Materials
- Management Audits of NRC's Four Regional Offices

#### Investigations

- Unlawful Interaction Between NRC and DOE Staffs Regarding Yucca Mountain

### **CHALLENGE 8**

#### ***Intra-agency communication (up, down, and across organizational lines).***

Internal communication is a fundamental and necessary aspect of conducting agency business. NRC needs effective internal communication channels and methods to support its critical health and safety mission. Information is the key resource that links managers with staff, the organization, and other internal stakeholders, enabling them to do their work cooperatively and efficiently in a coordinated manner. According to the Chairman, effective internal communication is essential for improving NRC's performance as a regulatory body. Results from OIG's Safety Culture and Climate Survey, issued agencywide in December 2002, showed that a majority of NRC employees believe the agency has not established a climate where traditional ways of doing things can be challenged or innovative ideas can fail without penalty.

NRC has implemented various actions to improve its internal communications over the past year. In response to the Safety Culture and Climate Survey findings, NRC established a safety culture and climate task force to work on improving communications internally. This task force issued a report with recommendations to the agency on how to address communications issues. The agency continues to use the electronic "EDO Updates," a type of communication between the EDO and the entire staff. NRC also recently redesigned its internal Web site to facilitate information access and service delivery. In addition, NRC continues to use the All Employees Meeting as an important and effective tool for direct two-way communication between the Commission and agency employees. NRC's draft strategic plan also addresses the importance of internal communication on achieving the agency's mission and performance goals.

### **Related Office of the Inspector General Work**

#### Audits

- Follow-up Review of NRC's Internet Usage
- Management Audits of NRC's Four Regional Offices
- OIG's 2002 Survey of NRC's Safety Culture and Climate

### **CHALLENGE 9**

#### ***Managing human capital.***

NRC must have a dynamic, diverse workforce with the appropriate knowledge, skills, and abilities to achieve its public health and safety mission. NRC has identified human capital management as a major challenge and a potential high-risk area. The demands include declining workforce numbers, institutional knowledge, and critical skills; new workforce demographic trends (e.g., aging workforce); and increasing market competition for a shrinking labor pool. Thirty percent of the Federal workforce will be eligible to retire in 5 years and an additional 20 percent could seek early retirement. This does not mean that 50 percent of Government employees will retire in the short-term, but that agencies must start planning for the workforce in the future.

The Office of Human Resources (HR) developed an agencywide set of strategic human capital management initiatives to mitigate the expected loss of personnel with the technical competencies necessary to sustain the accomplishment of NRC mission requirements. Some of these initiatives include early replacement hiring, recruitment bonuses, undergraduate fellowship programs, and the Senior Executive Service candidate development program. NRC also strives to ensure that 20 percent of new employees are hired into entry level positions. NRC also recently designated a Chief Human Capital Officer to advise and assist with NRC's workforce planning.

HR and the program offices are working together to identify where gaps will exist and develop strategies, such as increased recruiting efforts and training budgets, that will maintain the offices' core scientific and technical capacities. NRC has also created a program that emphasizes the core skills, or competencies, related to supervising and managing staff. With these efforts, NRC believes that it will successfully identify its critical skill needs and hire, develop, motivate, and retain the employees who possess the skills needed to support the agency's strategic goals and outcomes.

### **Related Office of the Inspector General Work**

#### Audits

- Management Audits of NRC's Four Regional Offices

## **CONCLUSION**

One of OIG's strategic goals is to identify opportunities for improvement in NRC's programs, operations, and corporate management. The Inspector General's identification of the most serious management challenges facing the agency and the work of the OIG staff helps achieve this goal. Furthermore, as evidenced by this review, the agency has already taken some steps to address the management challenges.

While the nine challenges identified in this report are distinct, they are also interdependent. By continuing to address these challenges through planning and in day-to-day operations, NRC can further enhance its efforts to successfully meet its public health and safety mission. To emphasize the importance I place on these concerns for the agency, I have prepared and distributed to all employees a pocket-sized card listing these major NRC management challenges.

cc: Commissioner McGaffigan  
Commissioner Merrifield

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